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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/987,930 | 11/16/2001 | Thomas P. Jerussi | 4821-438-999 | 7891 |

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| EXAMINER | |
|---|---|
| KIM, VICKIE Y | |
| ART UNIT | PAPER NUMBER |
| 1618 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 03/12/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/987,930 | KEVIN QUN FANG | |
| | Examiner | Art Unit | |
| | Vickie Kim | 1618 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *13-15,58,59 and 61-78* is/are pending in the application.

4a) Of the above claim(s) *68 and 70-75* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-15, 58-59, 61-67, 69, 76-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/11/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Status of Application*

1. Acknowledgement is made of amendment filed 7/5/06. Upon entering the amendment, the claims 13 and 60 are amended.

2. Claims 13-15, 58-78 are now pending. The elected claims 13-15, 58-59, 61-67, 69, 76-78 have been examined only to the extent that they read on use of the elected species in the claimed method. All remaining(or portions thereof) not drawn to the elected species are withdrawn from further consideration as being non-elected. The following rejections are made.

3. A confusing statement on finality of previous office action is clarified thru telephonic communication on 8/29/06, see interview summary(PTO-413) attached.

### *Response to Arguments*

In view of amendment filed 12/8/06, 112, 1st scope of enablement rejection is withdrawn. However, Applicant's arguments with respect to claims 127-132 are not persuasive and the rejection is maintained for the substantially same reason set forth in previous office action.

***Claim Rejections - 35 USC § 112, 1st:*** withdrawn in view of amendment filed 12/8/06.

***103 rejection***

1. Applicant's argument is not persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the

prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, state of art clearly recognizes substitution a drug with an active metabolite is advantageous because the potency of active metabolite where the dose used in the therapy can be minimized and therefore, unwanted side effect can be reduced not only small dose used but also other avoidance of other inactive metabolite being in blood stream which also causes unwanted side effect. For example, in this case, Morgan clearly states in his patent that advantages of use of active metabolite (i.e. compound 1, S.S hydroxybupropion) and its in vivo anti-depressant activity through NA mechanisms(col. 8, lines 10-20). Table 1 also supports high potency of S.S hydroxybupropion's activity through NA pathway proven by low dose of formula I used. Therefore, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

For the reasons above, the claims are maintained as rejected and same 103 rejection(previously issued) are repeated hereafter.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13-15, 58-59, 61-67, 69, 76-78 are rejected under 35 U.S.C. 103 as being unpatentable over Simeon et al(1986, Bupropion effects...) in view of Morgan (US6391875, 6274579, 2003/0064988).

> *** Note: all these patents are children cases of US6274579, and disclosures therein are substantially same. Therefore, the examiner will use US'579 to represent all these cases.

The claims are drawn to a method of treating or preventing an affective disorders (e.g. anxiety disorder) by administering a therapeutically or prophylactically effective amount of (2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol (or salt, solvates thereof) as a bupropion metabolite.

Simeon et al teach bupropion shows significant improvements of anxiety, hyperactivity(attention deficit disorders), conduct disorder, etc, see abstract.

Applicant's claims differ because they require bupropion's metabolite, (2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol.

However, it would have been obvious to one of ordinary skill in the art at that time of the invention was made to employee bupropion metabolite(i.e. 2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol) instead of bupropion to treat anxiety when Simeon et al is taken in view of Morgan's patent because Morgan teaches that (2S,

3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol) is active metabolite of bupropion and also proves the efficacy against affective disorders such as attention deficit disorders, etc.

Morgan et al(US'579) teaches a compound (2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol as active metabolit of bupropion and its composition used for various psychogenic disorders such as depression or addiction, see abstract and col.2, lines 21-63 and col.5, lines 36-52. Furthermore, it teaches that other activities(other conditions not metioned the patent) of Wellbutrin®(bupropion) could be attributed to the compound, (2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol , see col.8, lines 4-15. Since it is metabolite of bupropion, the efficacy of the compound should be significantly higher than bupropion(see col.9, table 1).

One would have motivated to use bupropion metabolite to treat anxiety, with reasonable expectation of success, because bupropion and its metabolites utilize same pathways to obtain same pharmacological activity but also the improved therapeutic effectiveness and safety are well proven and thus one would have increase industrial applicability by reduction of side-effects(due to lower dose used for the same outcome), etc.

One would have been motivated to combine these references and make the modification because they are drawn to same technical fields (constituted with same ingredients and share common utilities, and pertinent to the problem which applicant concerns about. MPEP 2141.01(a).

The effective dosage regimen(see col.5, lines 40-45), formulations(from col.5, lines 63 to col.6, lines25) and routes of administration(col.5, lines 59-62) are well taught by Morgan's patent and thus, the dependent claims 61-67 are properly included in this rejection.

US579 also teaches pure enantiomers and racemates, see col 3, lines 10-15.

***Conclusion***

5. No claim is allowed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickie Kim whose telephone number is 571-272-0579. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley be reached on 571-272-0616. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VICKIE KIM
PRIMARY EXAMINER

Vickie Kim
Primary Patent Examiner
March 5, 2007
Art unit 1618